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10/699,915	11/03/2003	Joachim Worm	MTL-004	3870

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WASHINGTON, DC 20007

EXAMINER
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BAREFORD, KATHERINE A

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/699,915

Applicant(s)

WORM, JOACHIM

Examiner

Katherine A. Bareford

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

The amendment of June 16, 2005 has been received and entered.

#### *Election/Restrictions*

1. Claims 18-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on February 3, 2005.
2. This application contains claims 18-19 drawn to an invention nonelected with traverse in the reply filed Feb. 3, 2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

#### *Drawings*

3. The drawings were received on June 16, 2005, indicating that Figures 1a, 1b and 2 are "Prior Art". These drawings are approved.

#### *Specification*

4. The objection to the disclosure because at page 6, line 11, "Fig. 1" should be "Fig. 1a and Fig. 1b" to provide reference to both drawings is withdrawn due to the amendment of June 16, 2005 making this correction.

*Claim Rejections - 35 USC § 112*

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, new section e) has been provided giving the step of "providing an anti-slip property to the resin-plate". This requirement has also be added in new section g) of claim 9. This is new matter as worded. The specification and abstract as originally filed indicate that the application of the resin/sand provides the anti-slip properties. However, as worded, an entirely separate step is allowed, such as applying the resin/sand and then putting grooves onto the applied coating, etc. to prevent slippage. Thus, the claims allow for methods beyond what is described in the case as originally filed.

*Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 496 545 A2 (hereinafter '545) in view of Toth (US 4243696).

'545 teaches a method of continuous production of a glass fiber reinforced resin plate. Figures 5 and 7 and column 1, lines 5-10 and column 2, lines 20-45. The formed plate can be coated with resin materials and filler. Column 2, lines 54-60 and column 6, lines 5-25. The method includes bonding of resin and glass fibers by heating to form a plate like base material. Column 4, lines 20-55. The base material is cooled after initial heating, forming a partially cured (or gelatinized) base material. Figures 5 and 7 and column 4, line 45 through column 5, line 20 (the heated material is removed from the first oven to a spot where the coating occurs, thus cooling will occur as the material passes through the unheated zone). The surface of the base material which is to be coated is not yet completely hardened. Column 6, lines 10-20. Then a mixture of resin material and filler can be applied to the not yet hardened top surface. Column 2, lines 54-60 and column 6, lines 15-25 and figure 5. The coated base material is then heated in

an oven to fully cure the material. Column 6, lines 20-40. '545 teaches that well known filler particles can be silica, feldspar or glass bubbles. Column 6, lines 55-60.

Claim 6: cooling fluid would be provided in the form of room temperature air. Figures 5 and 7 and column 4, line 45 through column 5, line 20 (the heated material is removed from the first oven to a spot where the coating occurs, thus cooling will occur as the material passes through the unheated zone of room temperature air).

Claim 7: the heating at step (d) can be to 240 to 300 degrees F, or 115 to 148 degrees C. Column 5, lines 35-50.

Claim 8: The base material can be initially covered by a film on the surface that is to be coated, and that film can be pulled off from the base material before the coating steps. Figure 1 and column 5, lines 1-10 and column 6, lines 5-15.

'545 teaches all the features of these claims except (1) that the specific filler and particulate materials are sand, (2) that the same type of resin is used in steps (a) and (c) (claim 2), (3) the cool down temperature (claim 5), (4) the precise temperature of the heating step (claim 7) and (5) that the applied coating has anti-slip properties (claim 1).

Toth teaches that it is desirable to form non-slip coatings on various surfaces. Column 1, lines 5-25. Toth teaches that a surface is provided with an initial base coat of resin. Column 4, lines 30-50. Then a coating that is a mixture of particle and resin is applied to the surface. Column 3, lines 60-68 and column 4, line 60 through column 5, lines 25. The particles can be silica sand, for example. Column 5, lines 15-20. After

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application the resin particle mixture is heated to cure, and heating can occur in an oven. Column 3, lines 55-68.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 to (1) use sand as the filler or particulate material with an expectation of desirable coating and product results, because '545 teaches using filler or particulate material, and that such filler or particulate material can be silica, and it is well known that sand is primarily silica material. (2) It would further have been obvious to modify '545 to use the same type of resin in steps (a) and (c) with an expectation of desirable coating and product results, because '545 teaches that the resin of step (a) can be polyester or other resins (column 4, lines 5-15) and that the resin of step (c) can be selected from a variety of compounds (column 2, lines 55-60 and column 6, lines 15-20), and one of ordinary skill in the art would understand that the resins could be either the same or different based on the product desired given the wide ranges taught. (3) It would further have been obvious to perform routine experimentation to optimize '545 to find the optimum cool down temperature at which the resin/filler coating is applied given the teaching by '545 of using a range of temperatures in the first oven and to control to provide only a partial cure, which would vary based on the resin material used (column 4, lines 30-55). (4) It would further have been obvious to perform routine experimentation to optimize '545 to select the optimum temperature of the curing in the second oven from the range given the teaching by '545. (5) It further would have been obvious to modify '545 to use the

resin/particle mixture to apply a coating with anti-slip properties as suggested by Toth with an expectation of providing a desirable coated surface, because '545 teaches a method of providing a desirable resin particle mixture on a surface, and Toth teaches that a resin particle mixture can be applied to a resin coated surface and then cured to provide desirable anti-slip properties on a surface.

9. Claims 9-11 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 496 545 A2 (hereinafter '545) in view of Miller, Jr. et al (US 4689259).

Claim 9: '545 teaches a method of continuous production of a glass fiber reinforced resin plate. Figures 5 and 7 and column 1, lines 5-10 and column 2, lines 20-45. The plate can be coated with resin materials and filler. Column 2, lines 54-60 and column 3, lines 5-10 and column 7, lines 15-25. The method includes bonding of resin and glass fibers by heating to form a plate like base material. Column 4, lines 20-55. The base material is cooled after initial heating, forming a partially cured (or gelatinized) base material. Figures 5 and 7 and column 4, line 45 through column 5, line 20 (the heated material is removed from the first oven to a spot where the coating occurs, thus cooling will occur as the material passes through the unheated zone). The surface of the base material which is to be coated is not yet completely hardened. Column 6, lines 10-20. Then a resin material can be applied to the not yet hardened top surface. Column 2, lines 54-60 and column 6, lines 15-25. Then particles, such as silica, can be applied to the not yet hardened surface. Column 7, lines 15-25 and column 6, lines 40-60. The applied



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143 <sup>particles</sup>  
~~sand~~ can be rolled into the curable layer. Figure 7 and column 6, lines 50-55. The coated base material is then heated in an oven to fully cure the material. Column 7, lines 1-15.

Claim 15: cooling fluid would be provided in the form of room temperature air.

Claim 10: the steps described above can be carried out in that sequence. See column 7, lines 15-25.

Figures 5 and 7 and column 4, line 45 through column 5, line 20 (the heated material is removed from the first oven to a spot where the coating occurs, thus cooling will occur as the material passes through the unheated zone of room temperature air).

Claim 16: the heating at step (d) can be to 240 to 300 degrees F, or 115 to 148 degrees C. Column 5, lines 35-50.

Claim 17: The base material can be initially covered by a film on the surface that is to be coated, and that film can be pulled off from the base material before the coating steps. Figure 1 and column 5, lines 1-10 and column 6, lines 5-15.

'545 teaches all the features of these claims except (1) that the specific filler and particulate materials are sand, (2) that the same type of resin is used in steps (a) and (c) (claim 11), (3) the cool down temperature (claim 14), (4) the precise temperature of the heating step (claim 16), and (5) the anti-slip property (claim 9).

Miller teaches that it is desirable to form non-skid coatings on various surfaces. Column 1, lines 10-25. Miller teaches that a surface is provided with a resin surface (that is the vinyl of the tile) in a softened (heated) form. Column 1, lines 10-25. Then a coating of grit particles is applied to the surface. Column 1, lines 10-25. The particles

are then embedded into the surface to provide non-skid characteristics. Column 1, lines 10-25.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 to (1) use sand as the filler or particulate material with an expectation of desirable coating and product results, because '545 teaches using filler or particulate material, and that such filler or particulate material can be silica, and it is well known that sand is primarily silica material. (2) It would further have been obvious to modify '545 to use the same type of resin in steps (a) and (c) with an expectation of desirable coating and product results, because '545 teaches that the resin of step (a) can be polyester or other resins (column 4, lines 5-15) and that the resin of step (c) can be selected from a variety of compounds (column 2, lines 55-60 and column 6, lines 15-20), and one of ordinary skill in the art would understand that the resins could be either the same or different based on the product desired given the wide ranges taught. (3) It would further have been obvious to perform routine experimentation to optimize '545 to find the optimum cool down temperature at which the resin/filler coating is applied given the teaching by '545 of using a range of temperatures in the first oven and to control to provide only a partial cure, which would vary based on the resin material used (column 4, lines 30-55). (4) It would further have been obvious to perform routine experimentation to optimize '545 to select the optimum temperature of the curing in the second oven from the range given the teaching by '545. (5) It further would have been obvious to modify '545 to use the

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10 ~~resin~~ <sup>application</sup> particle mixture to apply a coating with anti-slip properties as suggested by Miller with an expectation of providing a desirable coated surface, because '545 teaches a method of providing a desirable particle on resin coating on a surface, and Miller teaches that particles can be applied to a resin surface and then embedded to provide desirable anti-skid properties on a surface.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over '545 in view of Toth as applied to claims 1-2 and 5-8 above, and further in view of Holmes (US 4243719).

'545 in view of Toth teaches all the features of these claims except that the vapors are drawn off.

However, Holmes teaches providing resin/glass laminates. Column 1, lines 1-10. When performing coating with a liquid resin material that is heated and cross linked in an oven to a temperature of 80 to 230 degrees C, Holmes teaches to provide for provision to vent or remove organic vapors thus produced. Column 8, line 25 through column 9, line 25.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 in view of Toth to draw off vapors which emerge during the process as suggested by Holmes to provide for removal of toxic fumes, because '545 in view of Toth teaches a process whereby resins are applied and heated,

and Holmes teaches that it is well known to remove organic vapors from heated resins in coating processes.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over '545 in view of Miller as applied to claims 9-11 and 14-17 above, and further in view of Holmes (US 4243719).

'545 in view of Miller teaches all the features of these claims except that the vapors are drawn off.

However, Holmes teaches providing resin/glass laminates. Column 1, lines 1-10. When performing coating with a liquid resin material that is heated and cross linked in an oven to a temperature of 80 to 230 degrees C, Holmes teaches to provide for provision to vent or remove organic vapors thus produced. Column 8, line 25 through column 9, line 25.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 in view of Miller to draw off vapors which emerge during the process as suggested by Holmes to provide for removal of toxic fumes, because '545 in view of Miller teaches a process whereby resins are applied and heated, and Holmes teaches that it is well known to remove organic vapors from heated resins in coating processes.

12. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over '545 in-view of Toth as applied to claims 1-2 and 5-8 above, and further in view of Conard (US 3980610).

'545 in view of Toth teaches all the features of these claims except the use of the radical donors.

However, Conard teaches providing polyester resins that can have glass fiber incorporated. Column 1, lines 25-30 and column2, lines 20-25. Such resins are taught as conventionally being provided with a curing agent such as peroxide that provides radical donors and heated to cure. Column 2, lines 50-68..

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 in view of Toth to use a peroxide curing agent as suggested by Conard so as to provide a desirable curing, because '545 in view of Toth teaches a process whereby resins, such as polyester, are applied and heated to cure, and Conard teaches that when curing polyester resins, it is well known to use a peroxide curing agent for improved curing.

13. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over '545 in view of Miller as applied to claims ~~1-2-5~~<sup>9</sup> 11, and 14-17 above, and further in view of Conard (US 3980610).

'545 in view of Miller teaches all the features of these claims except the use of the radical donors.

However, Conard teaches providing polyester resins that can have glass fiber incorporated. Column 1, lines 25-30 and column2, lines 20-25. Such resins are taught as conventionally being provided with a curing agent such as peroxide that provides radical donors and heated to cure. Column 2, lines 50-68..

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 in view of Miller to use a peroxide curing agent as suggested by Conard so as to provide a desirable curing, because '545 in view of Miller teaches a process whereby resins, such as polyester, are applied and heated to cure, and Conard teaches that when curing polyester resins, it is well known to use a peroxide curing agent for improved curing.

#### *Response to Arguments*

14. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

As to the provision of the anti-slip properties, the Examiner has cited Toth and Miller as discussed in the rejection above.

As to the argument that '545 describes a sheet without a top layer that is coated with the mixture of resin/sand, the Examiner disagrees. The top layer at the time of application of the resin/sand mixture is the layer on which the mixture is applied. See figures 5 and 7 (applicators 66 and 94). As to the suggestion of using sand, this is addressed in the motivation section of the rejection above. As to the argument that '545

does not show the heating to a plate-like base material, and then cooling down until partially gelatinize, but not yet completely hardened, the Examiner disagrees. As discussed at column 4, lines 20-55, heating to a plate-like base material that is only partially cured is provided. Furthermore, the base material is cooled after initial heating, forming a partially cured (or gelatinized) base material. Figures 5 and 7 and column 4, line 45 through column 5, line 20 (the heated material is removed from the first oven to a spot where the coating occurs, thus cooling will occur as the material passes through the unheated zone). As to the argument as to claim 9, that rolling in is not provided, the Examiner notes column 6, lines 50-55 and figure 7, indicating that the applied particulate material can be impregnated into the partially cured material using roller 96.

### *Conclusion*

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the


shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) with the First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**KATHERINE BAREFORD**  
**PRIMARY EXAMINER**